Presentation to:

CDIAC

Introduction to Bond Math

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LEHMAN BROTHERS

- I. What is a Bond?
- II. Key Concepts of Municipal Bonds
- III. Yield Curve
- IV. Fixed vs. Variable Rate Debt
- V. Amortization Structures
- VI. Key Calculations from a Bond Sale
- VII. Question and Answer

Appendix – Sample financing schedules



What is a Bond?

What is a Bond?

- A bond is a debt instrument that allows issuers to finance capital needs. It obligates the issuer to pay to the bondholder the principal plus interest.
 - A buyer of the bond is the **lender or investor.**
 - A seller of the bond is the **borrower or issuer.**
- When an **investor** purchases a bond, he is lending money to a government, municipality, corporation, federal agency or other entity.
- In return for buying the bond, the issuer promises to pay the investor a specified rate of interest during the life of the bond and to repay the face value of the bond (the principal) when it "matures," or comes due.
- In addition to operating covenants, the loan documents require issuer to spend the bond proceeds for the slated projects.
- Among the types of bonds an investor can choose from are: U.S. government securities, municipal bonds, corporate bonds, mortgage and asset-backed securities, federal agency securities and foreign government bonds, among others.
- A bond can also be thought of as a contract between the issuer and investor. This contract specifies, for example, the terms of the bonds, the funds from which debt service will be paid and any operating covenants.

Source of Repayment for Debt Service

What is a Bond?

- ◆ General Obligation ("GO") Bonds Secured by a pledge of the issuer's full faith, credit and taxing power. The "full faith and credit" backing of a General Obligation bond implies that all sources of revenue, unless specifically excluded, will be used to pay debt service on the bonds.
- ◆ <u>Appropriation Bonds</u> Bonds are secured by a "promise to pay" with legislative approved appropriations. These are generally supported by the General Fund of issuer, unlike General Obligation bonds where funds are often not paid from the General Fund.
 - Examples would include Certificate of Participation (COPs) and Leased Revenue Bonds (LRBs).
- ♠ <u>Revenue Bonds</u> Revenue bonds are payable from a specific stream of revenues, such as a user fee or dedicated tax, and are not backed by the full faith and credit of the issuer. They are issued to finance specific enterprises or projects and are usually secured solely by revenues from those projects.
 Revenue bonds can generally be grouped into the following categories:
 - Utilities
 - Higher Education, Healthcare and Other Not-For-Profit
 - Housing
 - Transportation
 - Industrial Development, Pollution Control, and Other Exempt Facility Bonds
 - Securitized Revenue Bonds

Bond Covenants and Other Security Features of Revenue Bonds

What is a Bond?

Rate Covenants - Under a rate covenant, the issuer pledges that rates will be set at a level sufficient to meet operation and maintenance expenses, renewal and replacement expenses, and debt service. An alternative form of rate covenant requires that rates be set so as to provide a safety margin above debt service, after operation and maintenance expenses are met.

Example: "The Board will fix, charge and collect fees so that the Revenues will at all times be sufficient in each Fiscal Year to pay Operating and Maintenance Expenses and to provide funds at least equal to 115% of (1.15 times) the Principal and Interest Requirements...."

<u>Additional Bonds Test (ABT)</u> - Protects existing bondholders from the risk that their security will be diluted by the issuance of additional debt. The Additional Bonds Test must be met by the issuer in order to borrow additional debt secured by the same revenue source as the outstanding bonds.

Example: "The Net Revenues in each of the two Fiscal Years immediately preceding the date of issuance of such proposed Additional Bonds must be equal to at least 130% of the estimated Annual Debt Service for the year following the proposed issuance."

Bond Covenants and Other Security Features of Revenue Bonds (cont.)

What is a Bond?

Debt Service Reserve Fund - Provides a cushion to make timely debt service payments in the event of temporary adversity. Federal law limits the amount of tax-exempt bond proceeds that can be used to fund the debt service reserve fund to the lesser of:

- ◆ 10% of the principal amount of the issue;
- Maximum annual debt service; and
- ◆ 125% of average annual debt service on an issue.
- I. May also be required for appropriation debt.
- II. Many times a DSRF is not required for highly rated credits (e.g. UC Regents and CSU).

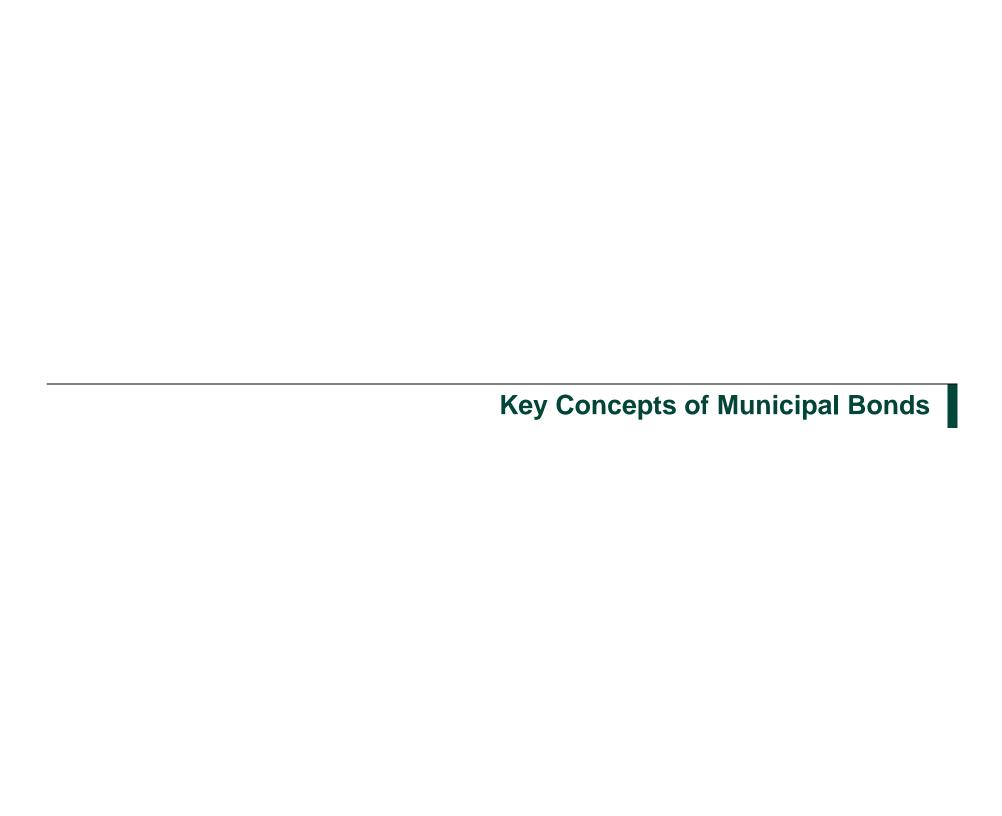
Other Covenants - Additional covenants might include a provision for insuring the project, a review by an independent auditor, or a prohibition against the sale of the project's facilities prior to repayment of outstanding debt, among others.

New Money

Bonds issued to provide new or additional funding for a project.

Refunding

Bonds issued to refinance certain existing bonds (proceeds used to repay old bonds). Refundings can be used to produce savings, restructure debt service or release the issuer from restrictive operating covenants.



Key Concepts – Basic Terminology

Key Concepts of Municipal Bonds

Principal

Maturity

♦ Serial Bonds

◆ Term Bonds and Sinking Funds

♦ Coupon

◆ Yield

◆ Price

♦ Interest

◆ Debt Service

◆ Original Issue Discount

◆ Original Issue Premium

◆ Bond Proceeds

Capital Appreciation Bonds

♦ Callable Bonds

♦ Insurance

◆ Bond Conventions

Key Concepts of Municipal Bonds

- Maturity:

- Date on which principal payments are due
- Typically, maturity dates are generally no longer than 30 years
- Most bond issues have principal maturing each year until the final maturity date of the series

- Principal:

- Also known par amount, or face value, of a bond to be paid back on the maturity date
- Typically, bonds are sold in \$5,000 principal denominations, often \$100,000 for variable rate bonds

	Maturity
Principal	Date
\$8,705,000	01/01/10
9,005,000	01/01/11
9,325,000	01/01/12
9,685,000	01/01/13
10,170,000	01/01/14
10,705,000	01/01/15
\$57,595,000	Total
<u> </u>	-

- ◆ Bonds can either mature annually (serial bonds) or as term bonds.
- ◆ A term bond is a series of sequential amortizations. Payments of princip all prior to the term bond's final maturity are referred to as sinking fund payments.

Year	Principal	Coupon	
2010	\$8,705,000	3.50%	
2011	9,005,000	3.50%	Serial Maturities
2012	9,325,000	3.90%	Serial Waturities
2013	9,685,000	5.00%	
2014	10,170,000*	5.25%	Term Bond
2015	10,705,000	5.25%	Term Bond
	\$57,595,000		
navment			

^{*}Sinking fund payment

Coupon, Interest and Debt Service

♦ Coupon

Key Concepts of Municipal Bonds

Dalet

- Percentage rate (based on principal/par amount) of annual interest paid on outstanding bonds
- Can be fixed or variable

◆ Interest

- Cost of borrowing money for the issuer
- Usually paid periodically
 - Semi-annually for fixed-rate bond
 - More frequently than semi-annually for variable-rate bonds
- Interest is calculated by multiplying principal by coupon (adjusted for length of period between interest payments)

♦ Debt Service

- Sum of all principal and interest on a bond.

				Debt
Year	Principal	Coupon	Interest	Service
2009			\$2,563,713	\$2,563,713
2010	\$8,705,000	3.50%	2,563,713	11,268,713
2011	9,005,000	3.50%	2,259,038	11,264,038
2012	9,325,000	3.90%	1,943,863	11,268,863
2013	9,685,000	5.00%	1,580,188	11,265,188
2014	10,170,000	5.25%	1,095,938	11,265,938
2015	10,705,000	5.25%	562,013	11,267,013
	\$57,595,000		\$12,568,463	\$70,163,463

Bond Pricing

Key Concepts of Municipal Bonds

Price – discounted present value of debt service on an individual maturity. Debt service is calculated using the coupon and discounted at the yield.

	Principal	Coupon	Interest	Debt Service	Present Value to 1/1/08 at 3.82%
1/1/2008					
7/1/2008			1.75	1.75	1.717
1/1/2009			1.75	1.75	1.685
7/1/2009			1.75	1.75	1.653
1/1/2010	\$100.00	3.50%	1.75	101.75	94.334
Total	\$100.00		7.00	107.00	99.389
				Price	99.389
			Pa	\$8,705,000	
			Purch	nase Price	\$8,651,812

Bond Pricing (cont.)

Key Concepts of Municipal Bonds

As a result, price and yield move in opposite directions.

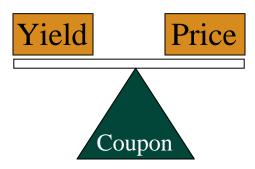


Par, Discount and Premium Bonds

Key Concepts of Municipal Bonds

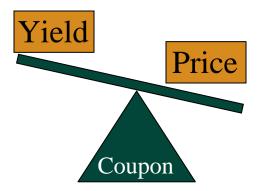
Par Bonds

- Coupon equals yield
- Purchase price equals principal amount



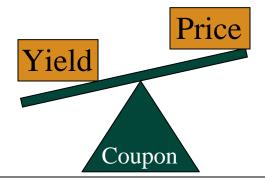
♦ Discount Bonds

- Coupon less than yield
- Purchase price less than principal amount



Premium Bonds

- Coupon greater than yield
- Purchase price greater than principal amount



Par, Discount and Premium Bonds (cont.)

Key Concepts of Municipal Bonds

Year	Principal	Coupon	Yield	Price	
2010	\$8,705,000	3.50%	3.82%	99.389	Discount Bonds
2011	9,005,000	3.50%	3.85%	99.017_	Discount Bonds
2012	9,325,000	3.90%	3.90%	100.000	Par Bond
2013	9,685,000	5.00%	3.94%	104.768	Duamium Danda
2015	20,875,000	5.25%	4.02%	107.440_	Premium Bonds
	\$57,595,000				

Original Issue Discount and Original Issue Premium

Key Concepts of Municipal Bonds

Proceeds	Original Issue Discount	Original Issue Premium	Price	Principal	Year
\$8,651,812	(\$53,188)		99.389	\$8,705,000	2010
8,916,481	(88,519)		99.017	9,005,000	2011
9,325,000			100.000	9,325,000	2012
10,146,781		\$461,781	104.768	9,685,000	2013
22,428,100		1,553,100	107.440	20,875,000	2015_
\$59,468,174	(\$141,707)	\$2,014,881		\$57,595,000	

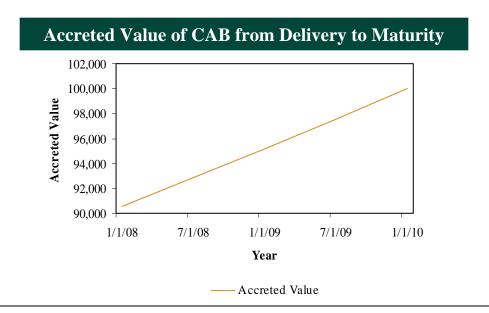
Capital Appreciation Bonds (CABs)

Key Concepts of Municipal Bonds

- ◆ CABs pay no periodic interest until maturity. The bonds accrete in value as interest accrues.
 - Usually sold as serial bonds, but can be structured as term bonds.
- ◆ At maturity an amount equal to the initial principal invested plus the interest earned, compounded semiannually at the stated yield, is paid.
- ◆ They are sold in denominations of less than \$5000 representing their present value and pay \$5000 at maturity.
- ◆ Though CABs are often more expensive (sold at a higher yield) than current interest bonds, they are used to achieve particular debt service patterns.

Example:

A CAB maturing in 2010 may have a par amount of \$90,595 but will have a value of \$100,000 when it matures. The difference between \$100,000 and \$90,595 represents the interest on the bond.



- ◆ Callable Bonds: bonds that can be redeemed by an issuer before their actual maturity on and after a specified call date (an optional redemption provision).
- ◆ Many times, fixed-rate bonds will be callable 10 years after issuance at a price of par. Historically, many municipal bonds were sold with 10-year call features where the bond was callable at 102 and declined to par by the 12th year.
- ◆ Municipal bonds are sold with embedded call features to provide restructuring flexibility and/or refinancing savings in the future.
- ◆ Investors charge the issuers for this flexibility through a higher yield and lower price thereby increasing the cost of the financing at the time of issuance.
 - Issuers need to weigh this increased flexibility and the possibility of savings down the road against this increased cost.

- ◆ Issuers purchase bond insurance in order that debt service will be paid even if there are insufficient revenues.
 - In exchange for this, investors will pay a higher price (lower yield) for an insured bond.
- ◆ Premium paid upfront, based on original debt service schedule; no credits for refundings or early repayment of bonds.
- ◆ Payments by insurer are a "loan" or an "advance" that have to be paid back
 - Not like property or health insurance
 - A form of "credit enhancement"
- ◆ The cost of an insurance policy needs to be compared to the observed market spread between insured and uninsured bonds. It makes sense to only insure those maturities for which the cost of the policy is less than 'cost' of issuing uninsured bonds.

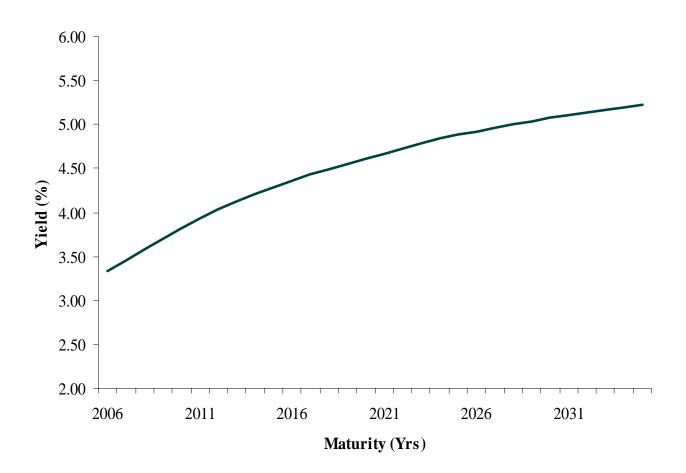
Bond Conventions

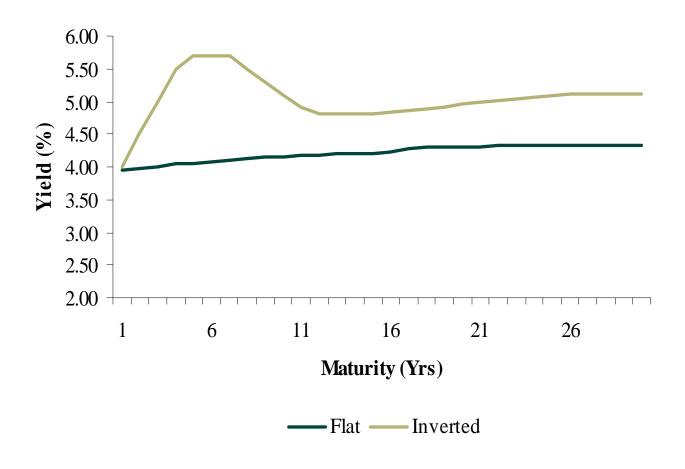
Key Concepts of Municipal Bonds

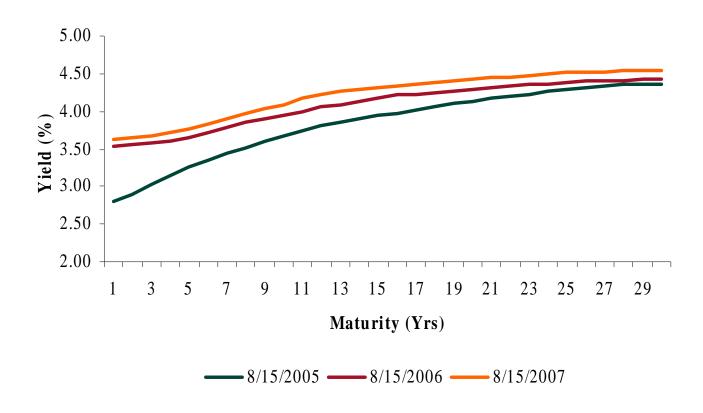
♦ Basis Point

- Yields on bonds are usually quoted in terms of basis points, with one basis point equal to one one-hundredth of 1 percent.
 - .50% = 50 basis points
- Day Count
 - -30/360
 - Usually for tax-exempt fixed rate bonds
 - Actual/Actual
 - Usually for tax-exempt variable rate bonds
- Pricing
 - Truncate to 3 decimals



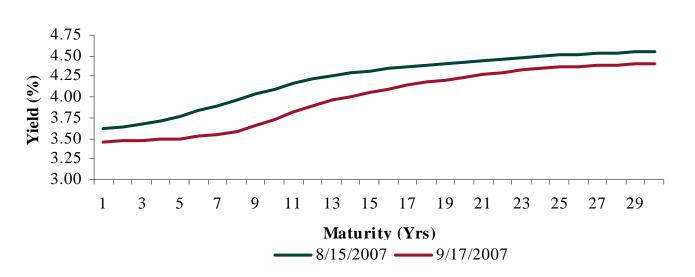






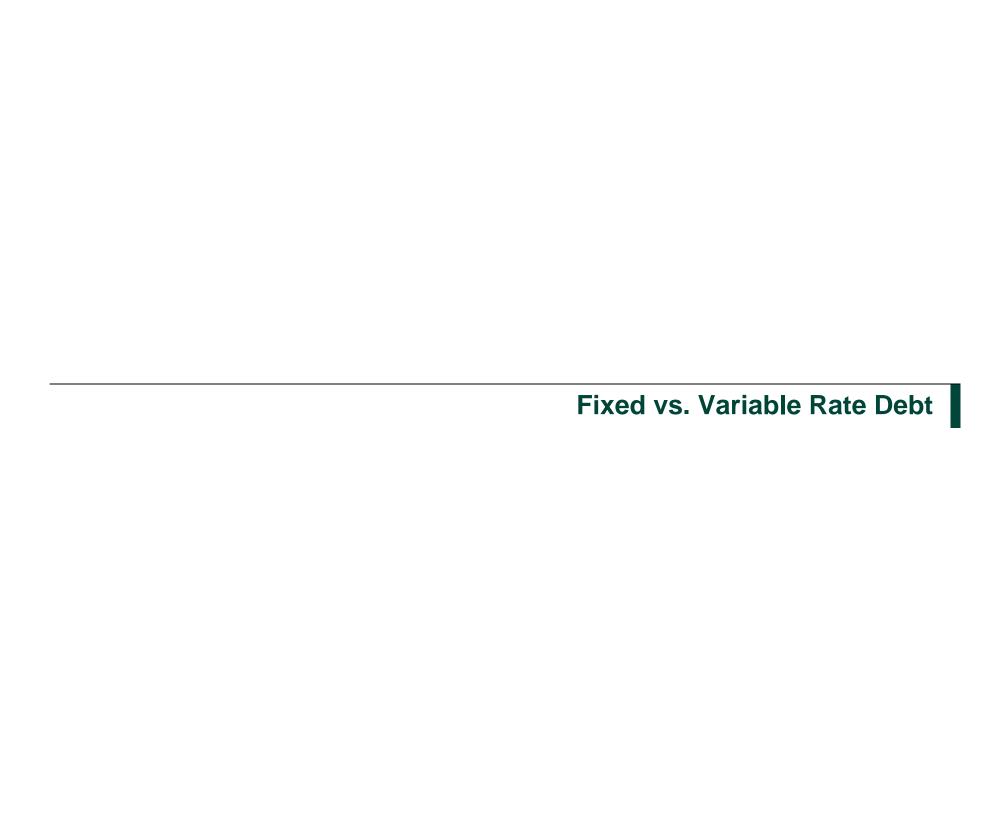
Yield Curve





10-Year Municipal Yields Compared to 10-Year Treasury Yields

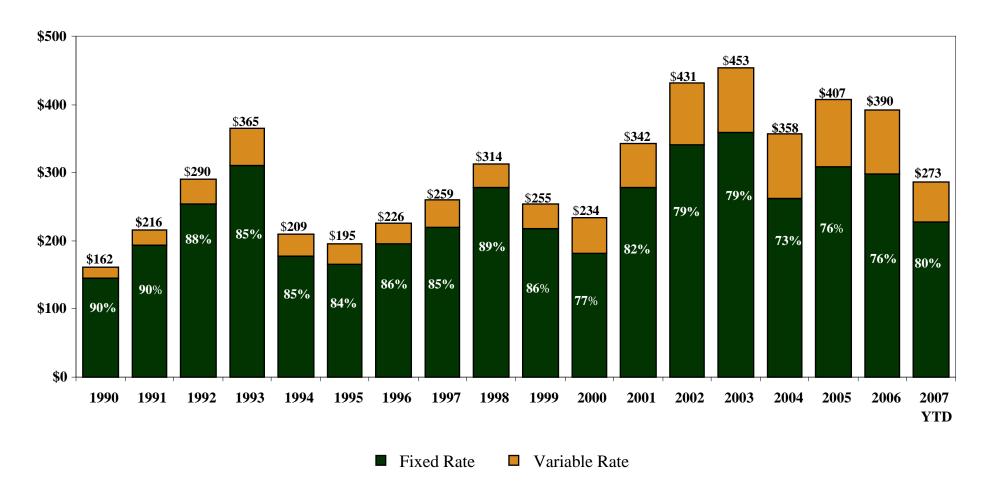




Fixed and Variable Rate Debt Issuance

Fixed vs. Variable Rate Debt

Total Municipal Debt (\$Billions Par Amount Issued)



Source: Thompson Financial.

Fixed vs. Floating-Rate Bonds

Fixed vs. Variable Rate Debt

Fixed Rate Bonds

Advantages

- No Interest Rate Risk Budget Certainty
- No Ongoing Credit Support Needed
- Traditional Investors Include: Bond Funds, Insurance Companies, Arbitrage Accounts, Trust Departments and Retail Investors

Disadvantages

- Higher Initial and Expected Interest Expense
- Less Flexible Call Feature than Floating Rate Bonds
- Potentially Higher Issuance Costs
- Fixed rate financings remain the most common approach in the current market.

Variable Rate Bonds

Advantages

- Easy to Restructure
- Lower Expected Cost of Capital
- Used to Diversify Debt Portfolio
- Traditional Investors Include: Money Market Funds, Corporations and Retail Investors

Disadvantages

- Interest Rate Risk
- Budgeting Uncertainty
- Unpredictable Pricing of Support Costs
- Additional Administrative Involvement
- ♦ Given the Fed's recent rate increases, variable rates have increased from their historical lows two years ago, with BMA recently resetting at 3.61%. This compares to a 20-year average of 3.20%.

Variable Rate Demand Bonds vs. Dutch Auction Securities

Fixed vs. Variable Rate Debt

Variable Rate Demand Bonds (VRDBs)

Bear interest at a variable (floating) rate that resets daily, weekly, monthly, quarterly, or any integral multiple of three months.

- ◆ Investors have right to tender or "put" the bonds back to the Issuer at par
- Requires liquidity support (external or self-liquidity)
- ◆ Carry both long- and short-term credit ratings
- Generally use combination of insurance and Standby Bond Purchase Agreement (SBPA) or a Letter of Credit (LOC).
- ◆ Most common form of variable rate financings

Dutch Auction Securities (SAVRS)

Bear interest at a variable (floating) rate set through a dutch auction process held every 35 or 7 days (or any multiple thereof).

- No put option for investors
- ◆ No need for liquidity facility
- ◆ Carry only long term credit rating
- ◆ Generally carry insurance
- ◆ Typically trade 10-15 basis points over VRDBs

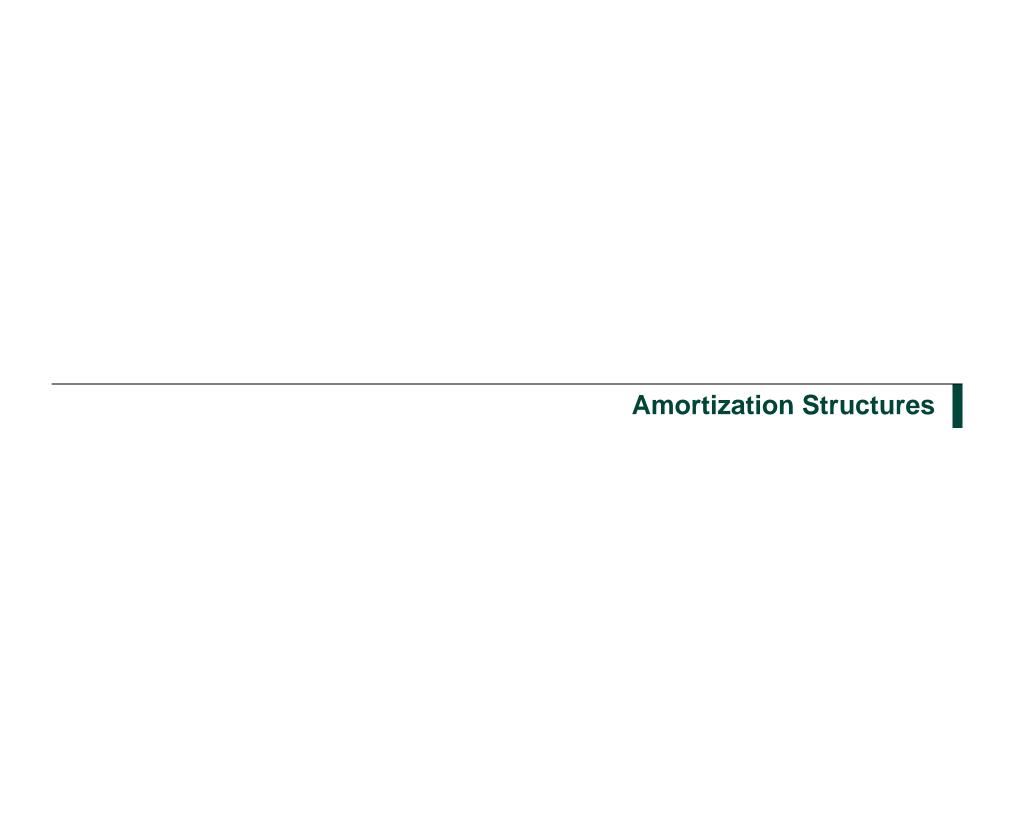
- ◆ Credit enhancement is a means of substituting the credit of the issuer with that of a higher rated third party guarantor.
 - Similar to insurance in the case of fixed rate bond, credit enhancement improves the marketing for bonds.
 - Credit enhancement typically takes the form of bond insurance or letters of credit (LOC).

Bond Insurance

- Several well-established bond insurers.
- Premium is based on projected total debt service and paid up-front as a one time fee.
- In effect for life of bond issue.

Letters of Credit (LOC)

- Typically provided by commercial banks.
- Premium is based on amount of debt outstanding and paid over time.
- Most LOCs carry an initial term shorter than the term of the bonds and must be renewed or replaced at each expiration date.



Alternate Amortization Structures

Amortization Structures

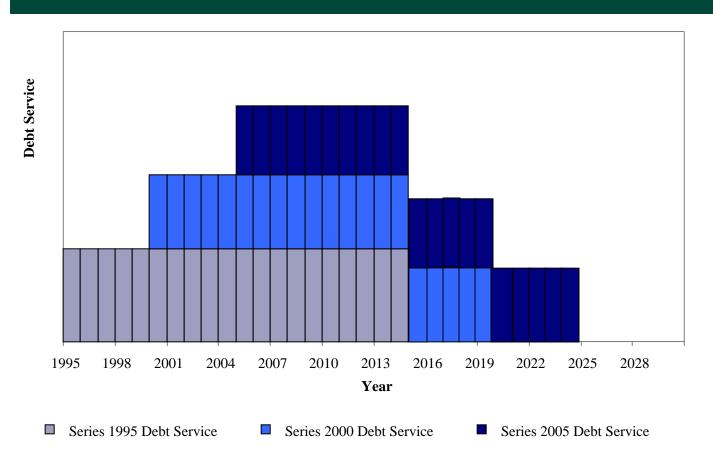
Issuers can use amortization structures to shape their overall debt structure pattern.

Level Principal				Level Debt Serv	vice	
Year	Principal	Interest	Total	Principal	Interest	Total
2009		2,538,905	2,538,905		2,563,713	2,563,713
2010	\$9,620,000	2,538,905	12,158,905	\$8,705,000	2,563,713	11,268,713
2011	9,620,000	2,202,205	11,822,205	9,005,000	2,259,038	11,264,038
2012	9,620,000	1,865,505	11,485,505	9,325,000	1,943,863	11,268,863
2013	9,615,000	1,490,325	11,105,325	9,685,000	1,580,188	11,265,188
2014	9,615,000	1,009,575	10,624,575	10,170,000	1,095,938	11,265,938
2015	9,615,000	504,788	10,119,788	10,705,000	562,013	11,267,013
	\$57,705,000	\$12,150,208	\$69,855,208	\$57,595,000	\$12,568,463	\$70,163,463

Impact of Issuing Multiple Stand-Alone Level Debt Service Issues Over Time

Amortization Structures

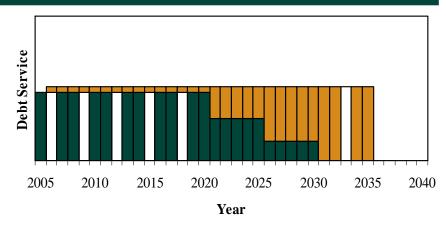
Multiple Stand-Alone Level Debt Service Structures



Principal Amortization Options

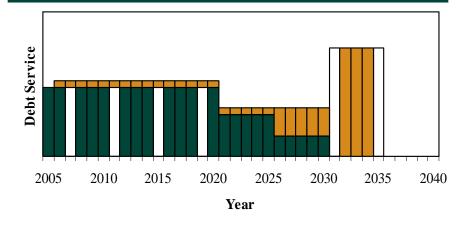
Amortization Structures

Wrapped Debt Service Structure



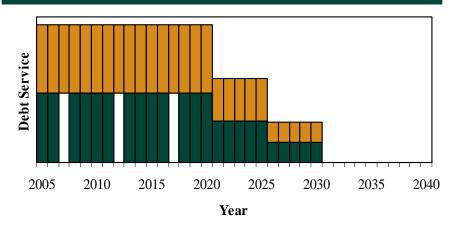
■ Existing Debt Service ■ New Money Debt Service

Deferred/Back-Loaded Debt Service Structure



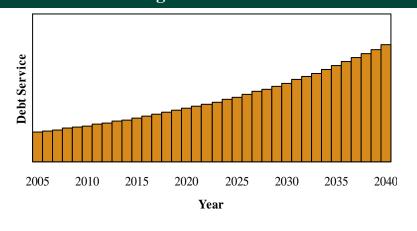
■ Existing Debt Service ■ New Money Debt Service

Accelerated/Front-Loaded Debt Service Structure

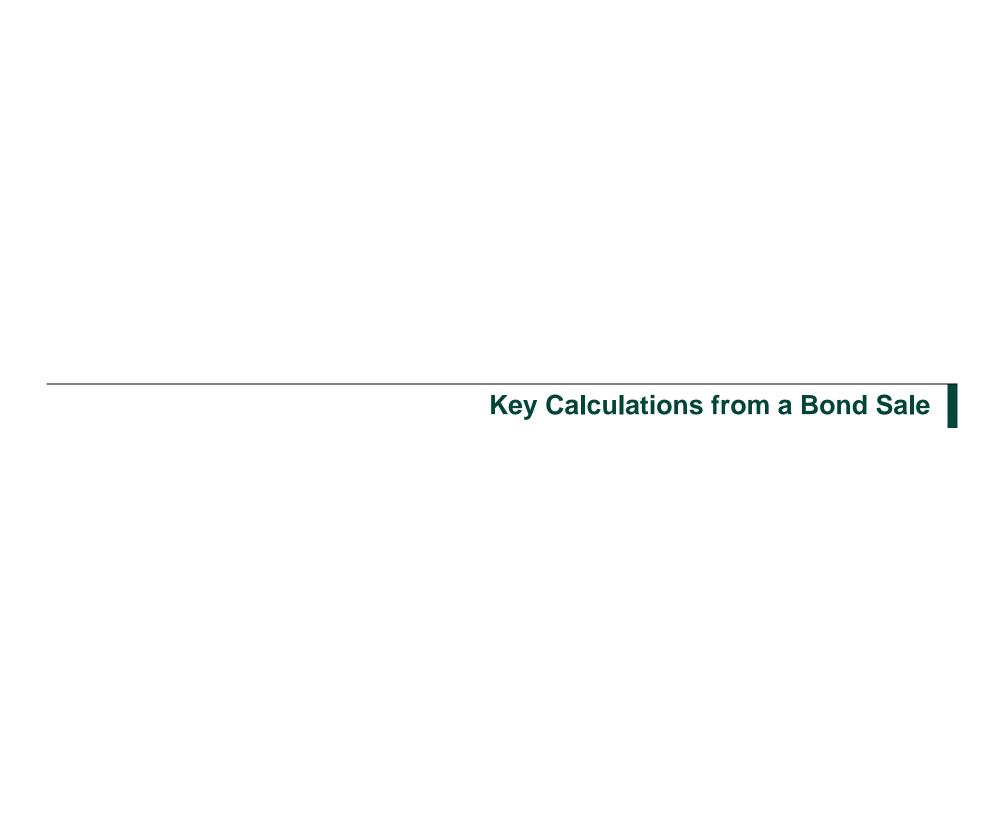


■ Existing Debt Service ■ New Money Debt Service

Increasing Debt Service Structure



■ New Money Debt Service



Key Calculations From a Bond Sale

Key Calculations from a Bond Sale

- ◆ Sources and Uses of Funds
- **♦** Issuance Expenses
- ◆ Net Debt Service Schedule
- ◆ Yield Calculations

Sources and Uses of Funds

Key Calculations from a Bond Sale

Sources:

Bond Proceeds	
Par Amount	\$57,595,000
Net Premium	1,873,174
Total Sources	\$59,468,174

Uses:

Project Fund Deposit	\$50,000,000
Other Fund Deposits	
Debt Service Reserve Fund	5,946,817
Capitalized Interest Account	2,489,242
Delivery Date Expenses	
Costs of Issuance	500,000
Underwriter's Discount	387,975
Bond Insurance	140,327
Other Uses of Funds	
Additional Proceeds	3,813
Total Uses	\$59,468,174

Borrower's Cost of Issuance

Rating Agency Fees

Issuer/ Authority Fee

Bond Counsel Fee

Borrower's Counsel Fee

Trustee Fees

Auditor's Fee

Printing and Mailing Costs

Miscellaneous and Contingency

Components of Underwriters' Discount

Takedown

Management Fee

Underwriters' Counsel

DTC

CUSIP

BMA Assessment

Dalcomp

Electronic Order Entry

Dalcomp Wire Charge

Cal PSA

CDIAC

Day Loan

Out-of-Pocket and Closing Costs

Verification Agent (if refunding)

Net Debt Service Schedule

Key Calculations from a Bond Sale

Period Ending	Principal	Coupon	Interest	Gross Debt Service	Capitalized Interest Fund	Net Debt Service
01/01/09			2,563,713	2,563,713	2,563,713	
01/01/10	\$8,705,000	3.500%	2,563,713	11,268,713		\$11,268,713
01/01/11	9,005,000	3.500%	2,259,038	11,264,038		11,264,038
01/01/12	9,325,000	3.900%	1,943,863	11,268,863		11,268,863
01/01/13	9,685,000	5.000%	1,580,188	11,265,188		11,265,188
01/01/14	10,170,000	5.250%	1,095,938	11,265,938		11,265,938
01/01/15_	10,705,000	5.250%	562,013	11,267,013		11,267,013
	\$57,595,000		\$12,568,463	\$70,163,463	\$2,563,713	\$67,599,750

- ◆ Yield is the discount rate at which the present value of future debt service payments are equal to the proceeds of the issue.
- ◆ The most common measures of the borrowing cost of a bond issue are the arbitrage yield, true interest cost (TIC) and all-in TIC.
- ◆ For short or non-callable issues, each is differentiated by which costs it takes account of. For example...

	Arbitrage		
	Yield	TIC	All-In TIC
D 17-1	ΦΕ7 ΕΩΕ ΩΩΩ	¢57.505.000	¢57.505.000
Par Value	\$57,595,000	\$57,595,000	\$57,595,000
+ Premium (Discount)	1,873,174	1,873,174	1,873,174
- Credit Enhancement/Insurance	-140,327	-140,327	-140,327
- Underwriter's Discount		-387,975	-387,975
- Cost of Issuance Expense			-500,000
Net Proceeds	\$59,327,847	\$58,939,872	\$58,439,872

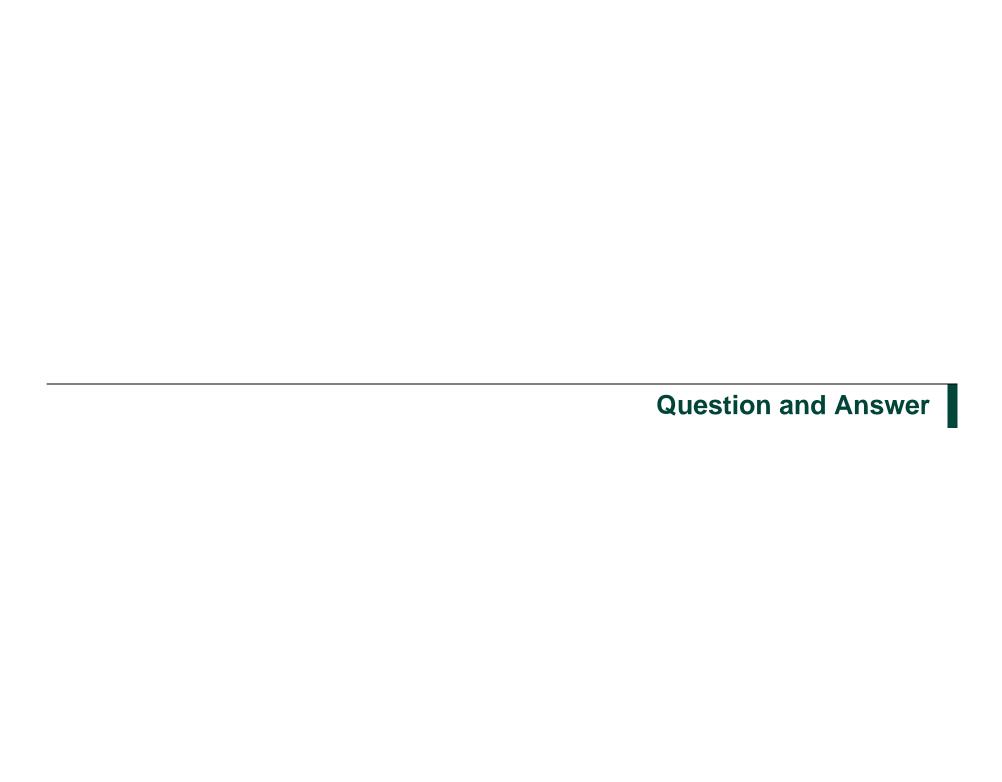
Yield Calculations for a Bond Issue

Key Calculations from a Bond Sale

In this example, the debt service used to calculate the Arbitrage Yield, TIC and All-In TIC are the same. The difference between them is the 'target' value.

	Arbitrage		
	Yield	TIC	All-In TIC
Discount Rate*	3.98%	4.14%	4.34%
1/1/2008	-\$59,327,847	-\$58,939,872	-\$58,439,872
7/1/2008	1,281,856	1,281,856	1,281,856
1/1/2009	1,281,856	1,281,856	1,281,856
7/1/2009	1,281,856	1,281,856	1,281,856
1/1/2010	9,986,856	9,986,856	9,986,856
7/1/2010	1,129,519	1,129,519	1,129,519
1/1/2011	10,134,519	10,134,519	10,134,519
7/1/2011	971,931	971,931	971,931
1/1/2012	10,296,931	10,296,931	10,296,931
7/1/2012	790,094	790,094	790,094
1/1/2013	10,475,094	10,475,094	10,475,094
7/1/2013	547,969	547,969	547,969
1/1/2014	10,717,969	10,717,969	10,717,969
7/1/2014	281,006	281,006	281,006
1/1/2015	10,986,006	10,986,006	10,986,006

^{*} Also known as the Internal Rate of Return, or IRR.



Questions and Answers

Question and Answer

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SOURCES AND USES OF FUNDS

Bond Proceeds:	
Par Amount	57,595,000.00
Net Premium	1,873,174.10
	59,468,174.10
Uses:	
Project Fund Deposits:	
Construction Fund	50,000,000.00
Other Fund Deposits:	
Debt Service Reserve Fund	5,946,817.41
Capitalized Interest Fund	2,489,241.99
	8,436,059.40
Delivery Date Expenses:	
Cost of Issuance	500,000.00
Underwriter's Discount	387,975.00
Bond Insurance (20 bps of Total Debt Service)	140,326.93
	1,028,301.93
Other Uses of Funds:	
Additional Proceeds	3,812.77
	59,468,174.10

BOND PRICING

Bond Component	Maturity Date	Amount	Rate	Yie	eld	Price	Premium (-Discount)
Serials:							
	01/01/2010	8,705,000	3.500%	3.820)%	99.389	-53,187.55
	01/01/2011	9,005,000	3.500%	3.850)%	99.017	-88,519.15
	01/01/2012	9,325,000	3.900%	3.900)%	100.000	
	01/01/2013	9,685,000	5.000%	3.940)%	104.768	461,780.80
		36,720,000					320,074.10
Term bond maturing	in 2015:						
· ·	01/01/2014	10,170,000	5.250%	4.020)%	107.440	756,648.00
	01/01/2015	10,705,000	5.250%	4.020)%	107.440	796,452.00
	-	20,875,000				_	1,553,100.00
		57,595,000					1,873,174.10
	Dated Date		01/01	/2008			
	Delivery Date		01/01/				
	First Coupon		07/01				
	Par Amount		57,595,0	00.00			
	Premium		1,873,1				
	Production		59,468,1	74.10	103.2	52321%	
	Underwriter's Dis	count	-387,9	75.00	-0.6	73626%	
	Purchase Price Accrued Interest		59,080,1	99.10	102.5	78695%	
	Net Proceeds		59,080,1	99.10			

BOND DEBT SERVICE

Period Ending	Principal	Coupon	Interest	Debt Service
01/01/2009			2,563,712.50	2,563,712.50
01/01/2010	8,705,000	3.500%	2,563,712.50	11,268,712.50
01/01/2011	9,005,000	3.500%	2,259,037.50	11,264,037.50
01/01/2012	9,325,000	3.900%	1,943,862.50	11,268,862.50
01/01/2013	9,685,000	5.000%	1,580,187.50	11,265,187.50
01/01/2014	10,170,000	5.250%	1,095,937.50	11,265,937.50
01/01/2015	10,705,000	5.250%	562,012.50	11,267,012.50
	57,595,000		12,568,462.50	70,163,462.50

BOND SUMMARY STATISTICS

Dated Date	01/01/2008
Delivery Date	01/01/2008
Last Maturity	01/01/2015
Arbitrage Yield	3.975882%
True Interest Cost (TIC)	4.135571%
Net Interest Cost (NIC)	4.164996%
All-In TIC	4.343415%
Average Coupon	4.723122%
Average Life (years)	4.620
Duration of Issue (years)	4.179
Par Amount	57,595,000.00
Bond Proceeds	59,468,174.10
Total Interest	12,568,462.50
Net Interest	11,083,263.40
Total Debt Service	70,163,462.50
Maximum Annual Debt Service	11,268,862.50
Average Annual Debt Service	10,023,351.79
Underwriter's Fees (per \$1000)	
Average Takedown	5.000000
Other Fee	1.736262
Total Underwriter's Discount	6.736262
Bid Price	102.578695

Bond Component	Par Value	Price	Average Coupon	Average Life
Serials Term bond maturing in 2015	36,720,000.00 20,875,000.00	100.872 107.440	4.173% 5.250%	3.544 6.513
	57,595,000.00			4.620

	TIC	All-In TIC	Arbitrage Yield
Par Value + Accrued Interest	57,595,000.00	57,595,000.00	57,595,000.00
+ Premium (Discount) - Underwriter's Discount - Cost of Issuance Expense	1,873,174.10 -387,975.00	1,873,174.10 -387,975.00 -500,000.00	1,873,174.10
- Other Amounts	-140,326.93	-140,326.93	-140,326.93
Target Value	58,939,872.17	58,439,872.17	59,327,847.17
Target Date Yield	01/01/2008 4.135571%	01/01/2008 4.343415%	01/01/2008 3.975882%

RESERVE FUND

City of Taylorville Series 2007A

Debt Service Reserve Fund (DSRF)

Date	Deposit	Interest @ 3.9758824%	Principal	Balance
01/01/2009	5,946,817.41	236,438.46		5,946,817.41
01/01/2010		236,438.46		5,946,817.41
01/01/2011		236,438.46		5,946,817.41
01/01/2012		236,438.46		5,946,817.41
01/01/2013		236,438.46		5,946,817.41
01/01/2014		236,438.46		5,946,817.41
01/01/2015		236,438.46	5,946,817.41	
	5,946,817.41	1,655,069.22	5,946,817.41	

Yield To Receipt Date:3.9758823%Arbitrage Yield:3.9758824%Value of Negative Arbitrage:0.04

RESERVE FUND

City of Taylorville Series 2007A

Capitalized Interest Fund (CAPI)

Date	Deposit	Interest @ 3.9758824%	Principal	Scheduled Draws	Balance
01/01/2009	2,489,241.99	74,470.51	2,489,241.99	2,563,712.50	
	2,489,241.99	74,470.51	2,489,241.99	2,563,712.50	

Yield To Receipt Date:3.9758823%Arbitrage Yield:3.9758824%Value of Negative Arbitrage:0.00

NET DEBT SERVICE

Period Ending	Total Debt Service	Capitalized Interest Fund	Net Debt Service
01/01/2009 01/01/2010 01/01/2011 01/01/2012 01/01/2013 01/01/2014 01/01/2015	2,563,712.50 11,268,712.50 11,264,037.50 11,268,862.50 11,265,187.50 11,265,937.50 11,267,012.50	2,563,712.50	11,268,712.50 11,264,037.50 11,268,862.50 11,265,187.50 11,265,937.50 11,267,012.50
	70,163,462.50	2,563,712.50	67,599,750.00